

What is claimed is:

1. An inductor, comprising:

a first unit inductor;

5 a second unit inductor of which one end is connected to one end of the first unit inductor and the other end is connected to a first external terminal, the second unit inductor being positioned in the outside of the first unit inductor in a shape of spiral; and

10 a third unit inductor of which one end is connected to the other end of the first unit inductor and the other end is connected to a second external terminal, the third unit inductor being positioned in the outside of the second unit inductor in a shape of spiral,

15 wherein the second unit inductor and the third unit inductor, of which a mutual inductance has a largest value in mutual inductances among unit inductors, are arranged in outer part of the inductor.

20 2. The method as recited in claim 1, wherein the first to third unit inductors are connected to each other through metal wire.

25 3. The inductor as recited in claim 2, wherein the first, second and third unit inductors are arranged in a plane circle or polygon on a substrate.

4. The inductor as recited in claim 2, wherein the first, second and third unit inductors are formed in a shape of circle or polygon arranged in a multi-layer structure on a substrate.

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5. The inductor as recited in claim 2, wherein each of the first, second and third unit inductors is a plane type inductor.

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6. The inductor as recited in claim 2, wherein each of the first, second and third unit inductors is a solenoid type inductor.

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7. A method for arranging unit inductors of an inductor, wherein the inductor includes a first unit inductor, a second inductor and a third inductor, and self-inductance magnitudes of the unit inductors are in the order of the self-inductance of the third inductor  $>$  the self-inductance of the second inductor  $>$  the self-inductance of the first inductor, the method comprising the steps of:

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a) coupling one end of the second unit inductor is connected to one end of the first unit inductor and one end of the third unit inductor to the other end of the first unit inductor in order to arrange the first unit inductor between the second and third unit inductors of which mutual-inductance has the largest value in mutual-inductances between the unit inductors;

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b) coupling the second unit inductor to a first external terminal; and

c) coupling the third unit inductor to a second external terminal.

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8. The method as recited in claim 7, wherein the first to third unit inductors are connected to each other through metal wire.

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9. The inductor as recited in claim 7, wherein the first, second and third unit inductors are arranged in a plane circle or polygon on a substrate.

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10. The inductor as recited in claim 7, wherein the first, second and third unit inductors are formed in a shape of circle or polygon arranged in a multi-layer structure on a substrate.

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11. The inductor as recited in claim 7, wherein each of the first, second and third unit inductors is a plane type inductor.

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12. The inductor as recited in claim 7, wherein each of the first, second and third unit inductors is a solenoid type inductor.